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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,217	04/08/2004	Troy K. Hopper	DRYA,002-03	9416

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EXAMINER

GILMAN, ALEXANDER

ART UNIT	PAPER NUMBER
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2833

MAIL DATE	DELIVERY MODE
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06/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/821,217	Applicant(s) HOPPER, TROY K.	
	Examiner Alexander D. Gilman	Art Unit 2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Attachement -2 pages</u> . |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, recites " ...a female conductive pin in electrical contact with said male conductive pin when said sleeve is engaged to said shell ...".

Since shell 30 and sleeve (34) are parts of a male connector (14) and should be engaged (welded) before mating the male connector with the female connector 16, it is unclear why the electrical contact between the male pin and the female pin should be provided by that engagement. According to the specification (p. 6, lines 16-22), the connection of the male and the female pins is a result of engaging of main nut 78 with adapter 32.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7 are, as they can be understood due to the 112 problem, rejected under 35 U.S.C. 102(b) as being anticipated by MacDonald.

With regard to claim 1, MacDonald (US 2,849,518) disclose a seal fitting comprising:

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a shell (2) ;

means retained to said shell (11) for clamping a lead wire (the lead wire should inherently be retained in the shell mechanically by gripping or clamping, since soldering is considered an electrical connection, not a mechanical one. Without retaining the lead wire in the shell, soldering would be damaged) ;

a ceramic disk (12) retained in said shell in spaced relationship to sensor wire clamping means;

a male conductive pin (13); .

a sleeve (1) engaged to said shell with the ceramic disk interposed between said sleeve and said wire clamping means;

a female conductive pin (28) extending through said sleeve and into electrical contact with said male conductive pin when said sleeve is engaged to said shell;

and means for clamping a lead wire being in electrical contact with said female conductive pin (at 29).

With regard to claim 7, MacDonald disclose (Fig. 2) that said ceramic disk and said wire clamping means are located at opposite ends of said shell.

Claims 1, 6, 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Chamberland et al.

With regard to claim 1, Chamberland et al (US 4,690,482) disclose a seal fitting comprising:

a shell (26) ;

means (34, 36) retained to said shell for clamping a lead wire;

a ceramic disk (30) retained in said shell in spaced relationship to sensor wire clamping means;

a male conductive pin (28); .

a sleeve (the forward portion of 26 with holes 26a) engaged to said shell with the ceramic disk interposed between said sleeve and said wire clamping means;

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a female conductive pin (42) extending through said sleeve and into electrical contact with said male conductive pin when said sleeve is engaged to said shell; and means (34, 36) in electrical contact with said female conductive pin for clamping a lead wire.

With regard to claim 6, Chamberland et al disclose (Fig. 8) a body (52) for engaging a bulkhead, said shell being provided with a groove (56) for receiving an O-ring therein for sealing against said body.

With regard to claim 7, Chamberland et al disclose (Fig. 1) that said ceramic disk and said wire clamping means are located at opposite ends of said shell.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chamberland et al in view of Gribble et al .

With regard to claims 2, 3, Chamberland et al do not disclose the wire clamping means comprising a clamping tab biased away from a receptacle for receiving the lead wire and a cap screw for tightening said clamping tab against the lead wire when the lead wire is received within the receptacle.

Gribble (US 3,015,084) disclose the wire clamping means

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comprising a clamping tab biased away from a receptacle for receiving the lead wire and a cap screw for tightening said clamping tab against the lead wire when the lead wire is received within the receptacle

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the Chamberland device with the structure, as taught by Gribble, to replace the non-separable, permanent (for example, soldering) connection of the wire with the dependable easily removable connection.

With regard to claim 5, Chamberland et al when modified disclose (Gribble) that the clamping tab (24) is provided with a prong (22) extending into the receptacle for receiving the wire.

Allowable Subject Matter

Claim 4 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

No prior art has been found to anticipate or render obvious the presently claimed subject matter. Specifically, none of the prior art of record discloses the combination of the limitations presented including the spring being confined by a threaded tab, said cap screw being threaded through said threaded tab.

Response to Arguments

Applicant's arguments filed 4/13/2007 have been fully considered but they are not persuasive.

As for rejection over MacDonald, Applicant argues that no technical reasoning to reasonably support (MPEP 2112, section 3) the inherent characteristic of necessity of the wire's retaining

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in the shell.

However the technical reasoning to support the inherent retaining of the wire inside the connector was presented in the Office action filed 12/08/2006.

It was stated that it is a general practice to retain mechanically the wire inside the connector , since just electrical connection of the wire 21 to the pin 13 (in MacDonald - by soldering) does not provide a dependable mechanical attachment these elements. Retaining the wire in a connector (a strain relief) is usually achieved by gripping , compressing or supporting (all these terms mean clamping) the wire.

As for the reinstatement of Chamberland rejection. It was shown in NOA filed 6/16/2006, that the 102 rejection over Chamberland was considered correct by Examiner, and the Allowance was based on invoking the 112 paragraph 6 (means plus function).

Using the 112 paragraph 6 (means plus function) was revised in the Office Action filed 12/08/2006, since the specification was unclear regarding " means for clamping" (please see, MPEP, 2181, section II)

Particularly it was unclear if spacer elements 40, 42 and or prong 60 are parts of the clamping means. Also, the Specification was not specific regarding the clamp functioning (p. 5, line 10) Also, it was unclear how were related means retained in said shell and the means being in electrical contact with said female conductive pin.

Applicant argues that elements 34 and 36 in Chamberland et al cannot be interpreted as means for clamping since they just "surround" the conductor 18.

However, Chamberland uses a term "enclose" which means "to confine, restrict in movement". When in claim ; a term "means for clamping" can and has to be interpreted in a broader meaning than a term "clamp" as it was presented in the Declaration. (For example, el. 60 in

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the Application is a means for clamping).

Alternatively, a strain relief, which is necessary for any cable or wire connector, is considered as "means for clamping".

As for the Declaration's statement (p. 4, section 8) that terms "separable" and "non-separable" connection are not used in the field of electrical connectors,

Examiner respectfully refers to Electrical Connector Handbook (please see an Attachment to this Action, content, ch. 6, 7).

As for the statement that the invention is for use in the specified area, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987). Also, please see Specification, p. 3, line 26

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it is generally known two basic types of wire connection - non-separable (soldering) and separable. Replacing non-separable connection with separable one requires the knowledge generally available to one of ordinary skill in the art. Reasons for replacement of the non-separable connection with separable one are related to dependability of the mechanical

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connection providing an uniform pressure for connection or manufacturing preferences or maintenance and repair needs.

As for "an uniform pressure ","(Remarks, p. 8, the three last lines -p. 9, line 10), Examiner respectfully refers to Gribble et al (the modifying reference for the 103 rejection) - col. 3, lines 3-20).

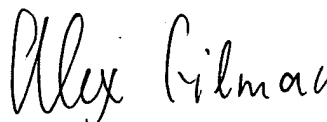
As for "maintenance and repair needs" ,Examiner respectfully submits that using the Gribbly et al wire clamping attachment allows replace wires when it is necessary.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander D. Gilman whose telephone number is 571 272-2004. The examiner can normally be reached on Monday-Friday, 10:30 a.m. - 8:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571 272-2800 ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

6/21/2007



ALEXANDER GILMAN
PRIMARY EXAMINER

Attachment to

ELECTRONIC CONNECTOR HANDBOOK

Theory and Applications

10/821217

Robert S. Mroczkowski

Attachment to

10/821217 Office Action

on June 2007

McGRAW-HILL

New York San Francisco Washington, D.C. Auckland Bogotá
Caracas Lisbon London Madrid Mexico City Milan
Montreal New Delhi San Juan Singapore
Sydney Tokyo Toronto

Attachment to
Office Act¹⁰

10/821217

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Chapter 8 Wire and Cable*Thomas Stearns*

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